

CLAIM OBJECTIONS/REMARKS

EXAMINER'S POSITION

Claims 4-15 have been objected to under 37 C.F.R. 1.75(e) as being in improper form because of multiple dependent claims depending from other multiple dependent claims.

APPLICANTS' POSITION

Claims 4-15 have been amended such that no multiple dependent claims depend from multiple dependednt claims.

The Examiner is requested to withdraw these objections.

REJECTION UNDER 35 U.S.C. 103

Claims 1-3 have been rejected under 35 U.S.C. 103(a) as being obvious in light of United States Patent Number 5,389,592, Weismann, et al. ("Weismann ").

EXAMINER'S POSITION

The Examiner takes the position that Weismann teaches a method for enhancing regenerated hydroprocessing catalysts. The active metals for these types of catalysts include those of the Group VIB and Group VIII metals, and most commonly Ni, Co, Mo, and W, citing col. 2, lines 2-10. The process utilizes a boron containing compound as well as solvents, such as alcohols, and the examiner states that the alcohols are equivalent to the claimed organic additives. The examiner continues that alcohols are typically miscible in water and include those having boiling points between 80-500°C. The Examiner cites isopropyl alcohol as having a boiling point of 82.3°C. The Examiner also continues, citing claim 6, that the boron containing compound can be boric acid, thus teaching contacting the catalyst with an acid.

The Examiner notes that the crystalline fraction of the catalyst is not discussed in Weismann, but takes the position that one having ordinary skill in the art would have performed these reactivation processes to any suitable catalyst, including amorphous or crystalline.

APPLICANTS' POSITION

It is applicants' position that one having ordinary skill in the art and knowledge of Weismann at the time the invention was made would not have found it obvious to arrive at the presently claimed invention.

The present invention relates to a process for activating a hydrotreating catalyst comprising a Group VIB metal oxide and a Group VIII metal oxide. This process involves contacting a catalyst with an acid and an organic additive. The organic additive has a boiling point in the range of 80-500°C and a solubility in water of at least 5 grams per liter, measured at

20°C and atmospheric pressure. After this contacting, the process can include an optional drying under conditions such that at least 50 wt % of the additive is maintained in the catalyst

Applicants note that Weismann is completely silent as to the boiling and/or the water solubility of the alcohols used therein. In fact, Weismann simply states that alcohols can be used.

Thus, applicants take issue with the Examiner's selection of alcohols based on the teachings of Weismann and respectfully note that the Examiner is improperly using hindsight. There are many alcohols that have a boiling point outside of the presently claimed range of 80-500°C, and these alcohols are miscible in water, which meets the solubility in water limitations of the present claims. For example, methanol has a boiling point of 65°C and ethanol has a boiling point of 78°C, and both are miscible in water, meaning that they are soluble in all proportions. Pentan-1-ol, Pentan-2-ol, Hexanol, Heptanol, Octanol, Nonol, and Decanol have boiling points within the presently claimed range, but their solubility in water is well outside of the presently claimed range. Thus, not all alcohols meet the requirements of the present claims, and the Examiner's selection of an alcohol meeting the present claim requirements is only possible because of the present teachings. Further, as demonstrated in the present examples, there is a synergistic effect noted when employing an acid and an alcohol as is presently claimed. The Examiner is requested to reconsider and withdraw this rejection.

Based on the preceding amendments and remarks, the Examiner is requested to reconsider and withdraw all rejections and objections and pass this application to allowance. The Examiner is encouraged to contact applicants' attorney should the Examiner wish to discuss this application further.

Respectfully submitted,

Date: October 28, 2009



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